

Responses to Comments in Letter CR8 from Laurie Hoekstra, Canadian Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the preceding comment letter.

1. After the Draft SEIS was published, SE2 updated the specific provisions of its proposed greenhouse gas mitigation program. The updated program would provide less funding than was indicated in the Draft SEIS. Section 3.1 has been revised to address the updated proposal. In addition, Section 3.1 has been revised to compare SE2's proposed mitigation program to other greenhouse gas offset programs that currently operate in the region. Offsets would not be limited to the state of Oregon.
2. The table listing estimated noise emission levels from various equipment at the plant has been deleted because it contained outdated data and was difficult to interpret.

The SEIS has been revised to clarify the recommended noise mitigation. In particular, SE2 has committed to submitting the post-startup compliance noise monitoring report within 60 days after startup (rather than 1 year after startup as originally proposed). Furthermore, SE2 would be required to initiate any needed controls for noise as soon as it is detected by the post-startup monitoring.

The recommended noise mitigation measures in Section 3.4 have been revised based on testimony given during the adjudicative hearings. The Final SEIS recommends establishment of low-frequency ambient limits based on the current Oregon noise standard: 65 dB and 62 dB at the 32 Hz and 64 Hz octave bands, respectively. These recommended ambient limits would apply at any existing dwelling in either the United States or Canada (regardless of land-use zoning at the dwelling) and would apply to any parcel with residential zoning, regardless of whether a dwelling currently exists on the parcel. For the post-startup compliance monitoring, SE2 would be required to measure noise levels at representative locations in both Washington and Canada.

3. You are correct in stating that the water supply requirement has been reduced from that previously indicated in the FEIS (see page 3.3-2). Also, Table 1-2 on page 1-10 indicates that groundwater would be extracted for the S2GF, having the potential impact of reducing the amount of groundwater available.

Regarding the concern that increased pumping might have an effect on water quality, the pumping itself would not affect groundwater quality; this could only be controlled at the source of the contamination, which, in the area in question, is predominantly associated with agricultural operations in the uplands northwest of Sumas. Nevertheless, in the event that nitrate levels in the city's potable water supply were to become elevated after startup of the S2GF, the applicant has agreed to pay for a nitrate treatment system for the city. Such a treatment system would provide city customers with water that meets water quality standards.

With respect to other wells in the area, there is a potential that the increased pumping locally could change groundwater flow rates sufficiently to have a small effect on the timing of a plume of nitrate contamination reaching (or leaving) a well. However, for a variety of reasons summarized below, it may not be reasonable to expect S2GF to assume responsibility for such fluctuations.

Based on a 1999 study by Environment Canada, a large percentage of the wells in the aquifer northwest of Sumas already contain nitrate at concentrations above the drinking water quality standards. That study also reported that nitrate levels are generally increasing, and estimated that if all contamination ceased today, it would take up to 50 years for the nitrate to pass out of the aquifer. These findings indicate that there is a strong possibility that nitrate concentrations in any given well in the area could increase over time, regardless of groundwater extractions at the Sumas city wells.

Based on extensive hydrogeological studies by the U.S. Geological Survey and Environment Canada, a large number of variables preclude the possibility of determining whether increased pumping would increase or decrease nitrate concentrations in any given well. Similarly, a number of variables would preclude being able to determine whether an observed increase or decrease in concentration was the result of an increase in pumping. Notably, other factors that would have much greater influence on increasing nitrate concentrations in a given well include rainfall or irrigation, which infiltrate the soil and carry nitrates down to the water table; a higher water table, which reduces the distance that nitrates must travel to reach the aquifer; groundwater pumping in the immediate vicinity of the well in question; use of residential septic systems; and most importantly, the upgradient applications of nitrate-rich fertilizers, manure, or nitrate-enhanced irrigation water. It would not be feasible to determine what mechanisms caused the nitrate concentration to increase or decrease in any given well at any given time without fully understanding each of the above factors, fully characterizing the hydrogeology of the aquifer, delineating every nitrate plume, and documenting all potential sources of contamination that could lead to a change in nitrate contamination.

Increased pumping would have no effect on the processes described above. Rather, it would result in slightly increasing the rate of groundwater flow along with any nitrate contamination dissolved in the groundwater. Therefore, a nitrate plume upgradient of a well theoretically could reach it somewhat sooner than it would if there had been no increase in pumping; likewise, the increase in pumping would also cause the plume to pass somewhat faster. Although an increase in pumping may influence the timing of such an impact, it would not cause it to occur.

4. In allocating water resources to this project in its Water System Comprehensive Plan, the city of Sumas has determined that this water use is consistent with its 20-year growth plan.
5. The proposed facility would be located within the 100-year floodplain, as is most of the city of Sumas. The SEIS indicates that there would likely be a small increase in flooding

as a result of constructing this facility. Based on the results of widely accepted flood modeling, it is expected that that impact would be very localized (see Section 3.6.1 of this SEIS for a discussion of flood level impacts). Nevertheless, as described in greater detail in this Final SEIS, the applicant has committed to performing more sophisticated flood modeling to assess the potential flood impact and to provide reasonable mitigation based on the results of that modeling.

6. The project would be designed to err on the side of caution with respect to a potential earthquake hazard. All earthquake-sensitive components of the facility would be designed in compliance with current national and local seismic design codes to withstand the Probable Maximum Earthquake.